Negation and Modality

A Study of Some Epistemic Predicates in Modern Greek

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Abstract

This paper deals with the question of negation and mood in Modern Greek verb complementation where there is a choice between an indicative and a subjunctive complement, in particular those with the verb *pistévo* (πιστεύω) ‘think, believe’, but also *nomízo* (νομίζω) ‘think, believe’, *kséro* (ξέρω) ‘know’, *thimáme* (θυμάμαι) ‘remember’, *vlépo* (βλέπω) ‘see’, *akúo* (ακούω) ‘hear’, and *vrísko* (βρίσκω) ‘find’. It presents the result of an empirical study of *pistévo*, based on an investigation undertaken in the Hellenic National Corpus (HNC) of sentential complements following *pistévo*. The factor of negation in the matrix is investigated along with two other factors, hypothesized to be of interest, namely first person singular of the present tense in the matrix and second person (singular and plural) in the complement. As was expected, neither any of the three factors individually or any combination of the three can be considered decisive for the choice of mood. What seems to be certain, however, is that the combination of all three constitutes a context that favours the subjunctive and in one case actually seems to exclude an indicative complement, namely when the illocutionary force of the utterance is that of a question, more or less rhetorically eliciting feedback. It thus does not seem to be the presence of the negation, nor any other syntactic factor, that actually triggers the subjunctive with this verb in some contexts, but a particular speech situation (where the three investigated factors are typically present). That is, the prerequisite is not syntactic, but pragmatic.

Keywords

Modern Greek – complementation – mood – negation – polarity – epistemic modality

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1 Negation and Mood Choice

There is a group of Modern Greek verbs that, when used in an epistemic sense, may choose either an indicative complement (introduced by the complementizers *óti* (ὅτι) or *pos* (πως)¹) or a subjunctive one (introduced by the subjunctive particle² *na* (να)).³ Among these are *nomízo* (νομίζω) ‘think, believe’, *pistévo* (πιστεύω) ‘think, believe’, *kséro* (ξέρω) ‘know’, *thimáme* (θυμάμαι) ‘remember’, *vlépo* (βλέπω) ‘see’, *akívo* (ακούω) ‘hear’, and *vrísko* (βρίσκω) ‘find’.⁴ In connection with the question of mood choice with these verbs, reference has often been

1 *Óti* and *pos* are more or less synonymous.

2 It has long (since Philippaki-Warbuton and Veloudis 1984) been generally assumed in the literature that *na* is not a complementizer but a modal marker. The syntactic status of this particle is, however, a debated issue (for further discussion, see, e.g., Roussou 2000 and Giannakidou 2011).

3 It should be noted that the terms indicative and subjunctive are not used to refer to some morphological mood marked on the verb of the complement, but to the modality expressed by the choice of introducer of the complement, *óti/pos* vs. *na*. Since the subjunctive is expressed solely by the modal marker *na*, with epistemic predicates the verb in the complement may well occur in a past tense form such as the aorist, traditionally not associated with the subjunctive.

4 Of interest for the discussion of the paper is when these verbs are used as epistemic predicates. The verb *kséro* ‘know’, e.g., may also be used non-epistemically, with obligatory coreference, to express dynamic modality, meaning ‘know how, be able’ as in (i):

- (i) *kséro na fiáxno pítes*
 know.PRS.1SG SBJV make.IPFV.NPST.1SG pies
 ‘I know how to make pies.’

Something similar goes for *thimáme* ‘remember’ which can be used with obligatory coreference, meaning ‘remember (to), not forget (to)’ as in (ii)–(iii):

- (ii) *thimáme na svíno ta fóta fěvghondas*
 remember.PRS.1SG SBJV turn.off.IPFV.NPST.1SG DEF lights leave.GERUND
 ‘I remember to turn off the lights as I’m leaving.’
- (iii) *thimíthika na svíso ta fóta fěvghondas*
 remember.PFV.PST.1SG SBJV turn-off.PFV.NPST.1SG DEF lights leave.GERUND
 ‘I remembered to turn off the lights as I was leaving.’

In these cases, a subjunctive complement is the only possible choice. See also the comment below (1.1, fn. 6) on the verb *nomízo* ‘think, believe’.

It is a fact that the kind of context typical of a polarity subjunctive sometimes seems to facilitate the choice of a subjunctive complement with some Modern Greek verbs. The verbs referred to above, however, do not behave in the same way in this respect.

It has frequently been noted in the literature that for the verb *nomízo* ‘think, believe’ negation is a prerequisite for a subjunctive complement (Kakouriotis 1982: 118; Giannakidou 1995: 100; 2000: 231; Roussou 1996: 273; 1999: 173; 2009: 1814; Holton, Mackridge, and Philippaki-Warbuton 1997: 453; Quer 2009: 1785; Siegel 2009: 1871):

- This is, to my knowledge, the only example of a Modern Greek epistemic predicate that does not occur with a subjunctive complement without a shift of meaning, unless it is negated. A non-negated *nomízo* does occur with a subjunctive complement, but then normally with a non-epistemic meaning rather like *léo* ('say') *na* 'think' = 'be of the opinion that', 'propose' referring to the future:

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- (3) *eghó nomízo na tin epistrépsis*
 I think.PRS.1SG SUBJ it.ACC return.PFV.NPST.2SG
 'I think you should return it.'⁶

1.2 *Semi-Factives*

Christidis (1982: 50–51) points out that with the verbs *thimáme* 'remember' and *kséro* 'know' subjunctive is obligatory in negated sentences when the verb is in the first person and in the present tense:

- (4) *dhen thimáme *óti / na ton éxo_sinandísi*
 NEG remember.PRS.1SG COMP / SBJV him meet.PF⁷.1SG
 'I don't remember *that I have / to have met him.'
- (5) *dhen kséro *óti / na éxi tétjes idhéas*
 NEG know.PRS.1SG COMP / SBJV have.IPFV.NPST.3SG such ideas
 'I don't know *that he has / him to have such ideas.'

The use of subjunctive in this context is a way to avoid a truth presupposition that would create a contradiction after these semi-factive predicates. By using the modal marker *na* instead of the complementizer *óti*, the speaker may explicitly mark the subject's (cf. Siegel 2009: 1874) opinion regarding the truth value of the complement proposition, namely as non-commitment to its truth. The same explanation holds for the semi-factive verbs *vlépo* 'see' and *vrísco* 'find' with the meaning 'discover, observe' (also mentioned by Christidis

6 The non-epistemic meaning of (3), repeated here as (i) a), is illustrated by the ungrammaticality of (i) b) where the aorist in the complement rules out the subjunctive. The only possible choice is an *óti/pos*-complement, as in (ii):

- (i) a. *eghó nomízo na tin epistrépsis*
 I think.PRS.1SG SUBJ it.ACC return.PFV.NPST.2SG
- b. **eghó nomízo na tin epéstrepses*
 I think.PRS.1SG SUBJ it.ACC return.PFV.PST.2SG
- (ii) *eghó nomízo óti/pos tin epéstrepses*
 I think.PRS.1SG COMP it.ACC return.PFV.PST.2SG
 'I think that you returned it.'

7 The perfect and pluperfect periphrases are glossed as PF and PLPF, respectively, also when combined with the subjunctive or future particles.

1982: 50 fn. 3⁸). Also *akúo* 'hear' could be regarded as semi-factive (when having the meaning 'become aware of').

Since the contradiction that occurs is connected only to the speaker at the time of the utterance, the problem with negation does not normally arise in other persons than the first or other tenses than the present. In these cases there is no need to mark the sentence modally in order to avoid a conflict between the negated predicate and the positive truth presupposition. However, in some contexts, for instance in different kinds of reported speech (more or less explicitly expressed), or when the speaker's earlier thoughts are being referred to, the subjunctive may still be used to avoid a truth presupposition:

- (6) *dhen thimáte na ton éxi_sinandísi*
 NEG remember.PRS.3SG SBJV him meet.PF.3SG
 'He doesn't remember to have met him.'
- (7) *dhen kséri na éxi tétjes idhéas*
 NEG know.PRS.3SG SBJV have.IPFV.NPST.3SG such ideas
 'He doesn't know him to have such ideas.'
- (8) *dhen thimómun na ton íxa_sinandísi*
 NEG remember.IPFV.PST.1SG SBJV him meet.PLPF.1SG
 'I didn't remember to have met him.'
- (9) *dhen íksera na éxi tétjes idhéas*
 NEG know.IPFV.PST.1SG SBJV have.IPFV.NPST.3SG such ideas
 'I didn't know him to have such ideas.'⁹

8 Christidis gives the following examples of *vlépo* and *vrísko* with subjunctive complements:

- (i) *dhen vrísko na éxi típota*
 NEG find.PRS.1SG SBJV have.IPFV.NPST.3SG anything
 'I can't find/see that there is anything wrong with him.'
- (ii) *dhen vlépo na pásxi apó típota*
 NEG see.PRS.1SG SBJV suffer.IPFV.NPST.3SG from anything
 'I can't see that he suffers from anything.'
- 9 With *kséro* 'know', when reference is made to one's own earlier thoughts, the non-commitment conveyed does not necessarily belong to some retrospective time. In (i) below the sub-

Regarding the verb *vlépo* 'see', Philippaki-Warbuton and Veloudis (1984: 160–161 fn. 4) point out that it is perfectly acceptable with a negation in the following example, but not without (cf. also Roussou 1996: 272):

- (14) a. *dhen ídha* *na kolímbise*
 NEG see.PFV.PST.1SG SBJV swim.PFV.PST.3SG
 'I didn't see that/if he swam.'
- b. **ídha* *na kolímbise*
 see.PFV.PST.1SG SBJV swim.PFV.PST.3SG

But, as Veloudis (1985: 191) notes, *vlépo* 'see', *thimáme* 'remember', *akúo* 'hear', and *kséro* 'know' are quite acceptable also in non-negated interrogatives (cf. also Roussou 1996: 273; 1999: 173):¹⁰

- (15) *ídhēs* *na kolímbise?*
 see.PFV.PST.2SG SBJV swim.PFV.PST.3SG
 'Did you see that/if he swam?'
- (16) *thimáse* *na pérase?*
 remember.PRS.2SG SBJV pass.PFV.PST.3SG
 'Can you remember him passing by?'
- (17) *ákuses* *na pandréftike?*
 hear.PFV.PST.2SG SBJV marry.PFV.PST.3SG
 'Have you heard that he should have got married?'
- (18) *kséris* *na éfje?*
 know.PRS.2SG SBJV leave.PFV.PST.3SG
 'Do you know that he should have/ if he has left?'

10 Also *vrísko*, mentioned by Christidis (see fn. 8) can be found in non-negated interrogative context as in (i):

(i) *vrískis* *na mjázun* *ta eliniká me ta ála*
 find.PRS.2SG SBJV be-similar.IPFV.NPST.3PL DEF Greek with DEF other
 ghrámata?
 letters
 'Do you find the Greek letters similar to the others?'

Also in this interrogative context an *óti/pos*-complement might give the impression that the speaker considers the content of the complement to be a fact, an interpretation that does not occur with the subjunctive.

That negation or interrogation may not be an absolute prerequisite for the subjunctive with the semi-factive verbs discussed above is indicated by examples like (12) and (13). But it may be more typical in a non-affirmative context that the need occurs to avoid an interpretation of truth presupposition. And this seems to be at least one possible reason for using the subjunctive with these verbs, thereby expressing the subject's non-commitment to the truth of the complement.

1.3 Pistévo

The verb *pistévo* 'think, believe' is sometimes referred to as behaving in a similar way as *nomízo* 'think, believe' with respect to negation and mood choice. Giannakidou (1994: 58) describes *dhen pistévo* 'not believe' as an epistemic predicate expressing negative commitment, thus taking a subjunctive complement, whereas the non-negated *pistévo* is described as a categorical epistemic¹¹ governing the indicative (cf. also Giannakidou 1997: 98). In later works she develops the link between mood and negative polarity put forward in Giannakidou 1994, and argues that the subjunctive itself is to be treated as a polarity item (Giannakidou 1995: 99–100). She notes, however, that Modern Greek differs from Romance languages, "where sometimes negation on an indicative verb suffices to trigger subjunctive in the complement" and continues: "a phenomenon interesting in itself, but not really attested in Greek" (Giannakidou 1998: 102). This is also the view of Giannakidou 2000 (the phenomenon is "only marginally attested in Greek") where it is, however, still argued that the subjunctive might be viewed as a polarity item (2000: 231), an argument based on facts like those exemplified in (1)–(2) and (14a–b) above (*nomízo* and *vlépo*). Also in Giannakidou 2009, it is stated that the subjunctive may be triggered in certain cases under negation, although the phenomenon is referred to as more marginal than in Romance (2009: 1888 fn. 3). In Giannakidou 2011, the following examples with *pistévo* are given to illustrate the so-called polarity subjunctive:

11 Giannakidou (1994: 58 fn. 4) refers to Farkas (1992) who coins the term: "Categorical epistemics are the predicates of belief which express certainty or likelihood with respect to the truth of their argument proposition."

- (19) a. *pistévo* *óti* *írthe* *o* *jánis*
 believe.PRS.1SG COMP come.PFV.PST.3SG DEF John
 ‘I believe that John came.’
- b. *dhen pistévo* *óti* *írthe* *o* *jánis*
 NEG believe.PRS.1SG COMP come.PFV.PST.3SG DEF John
 ‘I don’t believe that John came.’
- c. *dhen pistévo* *na* *írthe* *o* *jánis*
 NEG believe.PRS.1SG SBJV come.PFV.PST.3SG DEF John
 ‘I don’t expect that John came. (I would hope he didn’t).’

It is argued that “the subjunctive can be triggered in the lower clause if the higher verb, which otherwise selects the indicative, is negated” and that this holds for Greek, Romance and Balkan languages¹² (Giannakidou 2011: 71).

Quer (2009:1785) refers to the subjunctive with *dhen pistévo* and *dhen nomízo* as “the few cases of negation-licensed subjunctive attested in Greek”. He notes, however, that the epistemic predicate may license subjunctive even when it is not negated, giving an example with the negation in the complement (Quer 2009: 1785; cf. Giannakidou and Quer 1997: 108):

- (20) *pistévo* *na* *min fji* *norís*
 believe.PRS.1SG SBJV NEG leave.PFV.NPST.3SG early
 ‘I think (s)he won’t leave soon’

This, and even more the fact that *pistévo* with a subjunctive complement also occurs without a negation at all, makes the description negation-licensed subjunctive less felicitous:

- (21) *pistévo* *na* *éfje*
 believe.PRS.1SG SBJV leave.PFV.PST.3SG
 Lit. ‘I believe that he left.’ (from Roussou 1996: 276)
- (22) *pistévo* *na* *ákughe*
 believe.PRS.1SG SBJV hear.IPFV.PST.3SG
 Lit. ‘I believe that he was hearing.’ (from Veloudis 1985: 186)

12 For Romance languages Giannakidou refers to Quer (1998; 2001; 2009) and for Balkan languages to Siegel (2009).

- (23) *pistévo* *na* *dhiávases* *kazandzáki*
 believe.PRS.1SG SBJV read.PFV.PST.2SG Kazantzakis
 Lit. 'I believe that you (have) read Kazantzakis.' (from Philippaki-Warburton 1994: 323)

2 The Role of Person and Tense

In the discussions of mood choice with *pistévo*, reference is also made to person and tense. The question of tense restriction for the matrix verb (not occurring in the aorist or the future) when used with the subjunctive is discussed by Veloudis (1985: 186). He argues that *nomízo* and *pistévo* function as some kind of modal verbs and for this reason act in this modal-like manner. Also, Roussou (1996: 276; 1999: 173) refers to a restricted tense pattern with epistemic predicates that take a subjunctive complement, claiming that the matrix verb has to be in the present tense. Giannakidou and Quer (1997: 106–107) argue that “*pistévo* loses its modal properties (specifically, the ability to select a subjunctive complement)” when inflected for tenses other than the present, or for persons other than the first singular. Note the following examples from Quer (2009: 1785):

- (24) a. *dhen pistévo* *na* *éfje* *norís*
 NEG believe.PRS.1SG SBJV leave.PFV.PST.3SG early
 'I don't think (s)he left early.'
- b. **dhen pistévis* *na* *éfje* *norís*
 NEG believe.PRS.2SG SBJV leave.PFV.PST.3SG early
 'You don't think (s)he left early.'
- c. **dhen pístepsa* *na* *éfje* *norís*
 NEG believe.PFV.PST.1SG SBJV leave.PFV.PST.3SG early
 'I didn't think (s)he left early.'

However, the sensitivity to tense referred to seems rather to be a question of aspect. It does not occur in the *perfective* past tense aorist, as in the example (24 c) above. But occurrences in the *imperfective* past tense (Greek: *paratatikos*) show that the matrix verb is not restricted to the present tense (examples from the HNC corpus):

- (25) a. *dhen písteva na pári to lógho o*
 NEG believe.IPFV.PST.1SG SBJV take.PFV.NPST.3SG DEF word DEF
sinádhelfos tu pasók
 colleague DEF.GEN PASOK
 'I didn't think my colleague in the PASOK would take the floor.'
- b. *dhen písteva na ipárxi ke dhéftero*
 NEG believe.IPFV.PST.1SG SBJV exist.IPFV.NPST.3SG also second
ston kósmo
 in.DEF world
 'I didn't think there existed another one in the world.'
- c. *dhen písteva na íxa_kámi os tóte polá*
 NEG believe.IPFV.PST.1SG SBJV do.PLPF.1SG until then many
krímata
 sins
 'I didn't think I had made so many sins up to then.'

As for person, it is a fact that the matrix verb *pistévo* with a subjunctive complement mainly occurs in the first person singular (see 4.2 below for details). That it is not ungrammatical in the plural, however, or in another person, is illustrated by the following examples:

- (26) a. *dhen pistévume na ksexásate ta katorthómatá*
 NEG believe.PRS.1PL SBJV forget.PFV.PST.2PL DEF deeds
mas sto oáka
 our at.DEF OAKA
 'We don't believe you've forgotten our deeds at the Olympic Stadium of Athens!'
- b. *ávrio éxo páli randevú, an_ke ap_óti*
 tomorrow have.PRS.1SG again appointment although from_what
mu ípe dhen pistévi na éxun_aláksi
 me tell.PFV.PST.3SG NEG believe.PRS.3SG SBJV change.PF.3PL
polí ta prághmata
 much DEF things
 'Tomorrow I have another appointment, although from what he told me he doesn't think that things have changed so much.'

The following example illustrates that another person than first combined with past tense is also acceptable:

- (27) *dhen písteve na íxe próvlima me*
 NEG believe.IPFV.PST.3SG SBJV have.IPFV.PST.3SG problem with
to xrimatikó_posó ítan sxetiká mikró
 DEF sum-of-money be.IPFV.PST.3SG rather small
 'He didn't think he had a problem with the sum of money. It was rather small.'

3 Meaning Shift

It has been argued that with the use of a subjunctive complement with *pistévo* follows a semantic shift of the main verb. According to Giannakidou (2011: 71) *dhen pistévo na* in example (19 c) above "loses its epistemic meaning and means rather something akin to 'I hope not.'" Philippaki-Warbuton argues that the subjunctive presents the embedded phrase "more as wish than opinion" (1994: 323; cf. also Holton, Mackridge, and Philippaki-Warbuton 1997: 452).

It is true that the subjunctive complement is often used to convey a hopeful assumption. But I would like to argue that it is the assumption (a form of non-commitment to the truth of the complement) that is crucial, whereas the hope may be there or not (cf. section 5 below on similar use of the Scandinavian modal particle *väl/vel*). The following sentence is scarcely meant to convey that the speaker hopes that the new government will not be able to finish what they have undertaken in time:

- (28) *se dhío mínes pándos dhen pistévo na*
 in two months anyway NEG believe.PRS.1SG SBJV
oloklirónonde óla ósa anélave i néa
 be.finished.IPFV.NPST.3PL all that undertake.PFV.PST.3SG DEF new
kivérnisi
 government
 'In any case, I doubt that all that the new government has undertaken can be finished in two months.'

4 A Corpus Investigation of *pistévo*-Complements

Joseph and Philippaki-Warbuton (1987: 181–182) argue that a *na*-complement is much more natural than an *óti*-complement with *pistévo* when the sentence is negated. That a *na*-complement is the more natural alternative in a negated context is illustrated by the following examples:

- (29) a. *?dhen pistévo oti tha fíjis*
 NEG believe.PRS.1SG COMP FUT leave.PFV.NPST.2SG
 b. *dhen pistévo na fíjis*
 NEG believe.PRS.1SG SBJV leave.PFV.NPST.2SG
 Lit. 'I don't believe that you will leave.'

The negated example (b) is considered to be more natural than (a) which, admittedly, is a bit hard to interpret taken out of context. But what is actually illustrated by this? The fact that a *na*-clause is taken as more natural than an *óti*-clause in this specific example does not necessarily have to be due to the negation. If the negation is kept intact and instead the person of the complement is exchanged, the result of the comparison will change considerably:

- (30) a. *dhen pistévo óti tha fíghun*
 NEG believe.PRS.1SG COMP FUT leave.PFV.NPST.3PL
 b. *dhen pistévo na fíghun*
 NEG believe.PRS.1SG SBJV leave.PFV.NPST.3PL
 Lit. 'I don't believe that they will leave.'

There is hardly any need to question example (30a).

If a *na*-complement were the most natural choice for *pistévo* in a negated sentence, one would expect that it would be more frequent than the other complement types (with *óti/pos*) in that kind of context, which is not the case (see 4.1). So what is it that seems to make the subjunctive more “natural” in this sentence and others like it? Are there other contextual factors that may favour or even trigger the subjunctive? This question was the point of departure for an investigation in the Hellenic National Corpus (HNC) of *pistévo*-complements, undertaken in order to acquire some empirical data of contextual factors that might be of interest for the choice of mood with this predicate. Apart from negation, two other factors were examined (both being present in the typical example above and possibly of interest), namely, the occurrence of the matrix verb in the first person singular of the present tense and the occurrence of the verb in the complement in the second person.

TABLE 1 *Distribution of the complement types*

Complement type	Occurrences	% occurrences
<i>Óti</i>	13554	89
<i>Pos</i>	1463	10
<i>Na</i>	150	1
Total	15167	

TABLE 2 *Negated pistévo—lemma*

Complement type	Occurrences	% of occurrences	% of complement type
<i>Óti</i>	694	80	5
<i>Pos</i>	99	11	7
<i>Na</i>	75	9	50
Total	868		

4.1 *Negation*

A search in the corpus for the verb *pistévo* in all its forms immediately followed by *óti*, *pos*, or *na* gave the following numbers of relevant hits, respectively: 13554, 1463, and 150 (see table 1). That is, *na* occurs in approximately 1% of the complement clauses found.

There were in all 868 sentences that contained a negated *pistévo* followed by a sentential complement (see table 2). The distribution of the three complement types was the following: 694 complements were introduced by *óti*, 99 by *pos*, and 75 by *na* (that is, *óti* and *pos* represent together more than 90%), which, not unexpectedly, demonstrates that *na* is totally less frequent after a negated *pistévo* in the matrix clause than *óti* and *pos*. In other words, as was mentioned above, the *na*-complement cannot be *triggered* by the negation in the narrow sense of the term. On the other hand, 50% of the *na*-complements occur in a negated context which should be compared to approximately 5 and 7%, respectively, for the complements introduced by *óti* and *pos*. However, the 50% in non-negated context show that the negation is far from being a prerequisite for a subjunctive complement after *pistévo*. In other words, it does not seem to be a question of *licensing* either. The overall picture of these data is that negation in itself does not seem to be crucial to the choice of a subjunctive clause after *pistévo*.

TABLE 3 *Pistévo—Present 1sg*

Complement type	Occurrences	% of occurrences	% of complement type
<i>Óti</i>	5454	91	40
<i>Pos</i>	420	7	29
<i>Na</i>	134	2	89
Total	6008		

TABLE 4 *Negated pistévo—Present 1sg*

Complement type	Occurrences	% of occurrences	% of complement type (<i>Pistévo</i> Present 1 sg)
<i>Óti</i>	331	77	6
<i>Pos</i>	31	7	7
<i>Na</i>	68	16	51
Total	430		

4.2 *Present First Person Singular in the Matrix*

A second search of *pistévo* in the corpus (in the same context but in word form instead of lemma¹³) demonstrated that the *na*-complements in a great majority of the cases occurred after a matrix clause with the predicate in the first person singular of the present tense. Of the 150 occurrences of *na*-clauses, 134 (89%) were of this kind (compared to 40 and 29%, respectively, for *óti* and *pos* complements). However, also in this context the *na*-complements were totally in minority, 98% of the complements following either *óti* or *pos* (see table 3).

Considering negation, a similar picture emerges as from the lemma search. There were 430 negated occurrences of *pistévo* in the present 1sg, 331 followed by *óti*, 31 by *pos*, and 68 by a *na*-clause (see table 4). That is, only in approximately 16% of the negated sentences was the complement a *na*-clause. On the other hand, also in this case a large part of the *na*-complement occurred in negated context (51% to be compared with 6 and 7%, respectively, for *óti*- and *pos*-complements).

13 Only relevant occurrences of the word form were counted.

According to these data, neither the negation of the matrix predicate nor its occurrence in the first person singular in the present tense, or the combination of both, seems to be decisive for the choice of a *na*-complement. In the majority of the cases, we find some other complement type. Relative to the other complement types, however, a greater percentage of the *na*-complements occur in this kind of context.

4.3 Second Person in the Complement

The third factor investigated was the occurrence of second person in the complement. As table 5 illustrates, 324 sentences in the material were of this type. The complement types were distributed as follows: in 256 of the cases the subordinate clause was introduced by *óti*, 16 were *pos*-clauses, and 52 *na*-clauses.¹⁴

Interestingly, if number in the complement is taken into account and the occurrences in the singular are considered, the difference changes considerably, the number of indicative complements decreasing to 25 (see table 6).

14 48 of the sentences found in the corpus with second person in an indicative complement (44 with *óti*, 4 with *pos*) were of the kind exemplified in (i) and (ii) below. Second person here has the meaning of 'one' and these occurrences have not been considered relevant for the study:

(i) *i zília se káni na min amfvális poté*
 DEF jealousy you.ACC make.PRS.3SG SUBJV NEG doubt.IPFV.NPST.2SG ever
óti éxis ádhiko, pistévis óti éxis pánda dhikio
 COMP have.PRS.2SG wrong believe.PRS.2SG COMP have.PRS.2SG always right
 'Jealousy makes you never to be in doubt whether you might be wrong, you believe you are always right.'

(ii) *pistévo pos borís na petíchis me lígha*
 believe.PRS.1SG COMP be.able.PRS.2SG SBJV succeed.PFV.NPST.2SG with few
mésa éna kaló apotélesma éxondas tus sostús sinerghátes
 means INDF good result have.GERUND DEF right companions
 'I think you can manage a good result with few means having the right companions.'

A frequent context for second person in an indicative complement is when *pistévo* in the matrix is also in the second person, e.g. in questions like the following:

(iii) *pistévis óti éxis stil?*
 believe.PRS.2SG COMP have.PRS.2SG style
 'Do you think that you have style?'

TABLE 5 *Pistévo lemma—second person in the complement*

Complement type	Occurrences	% of occurrences	% of complement type
<i>Óti</i>	256	79	2
<i>Pos</i>	16	5	1
<i>Na</i>	52	16	35
Total	324		

TABLE 6 *Pistévo lemma—second person singular in the complement*

Complement type	Occurrences	% of occurrences	% of complement type
<i>Óti</i>	20	44	0,1
<i>Pos</i>	5	11	0,3
<i>Na</i>	20	44	13
Total	45		

To sum up: the mere occurrence of any of the factors studied does not seem to be decisive for the choice of mood. All of them, however, seem to occur more frequently in the subjunctive complements found than in the complements introduced by *óti* or *pos*.

4.4 *Relative Influence of the Investigated Factors—Single and in Combination*

In many cases, two or three of the factors discussed occur together. Therefore, in order to examine their relative influence every factor was also considered individually. Consider table 7.

- (iv) *kánondas énan apologhismó, pistéвете pos ferthíkate*
do.GERUND INDF account believe.PRS.2PL COMP behave.PFV.PST.2PL
sto taléndo sas ópos tu áksize?
to.DEF talent your as it.GEN deserve.IPFV.PST.3SG
'Summing up, do you think that you have behaved towards your talent as it deserved?'

70 of the 256 occurrences with *óti* and 3 of the 16 with *pos* were of this kind.

TABLE 7 Occurrence of single factors

	Indicative (% of 15017*)	Subjunctive (% of 150**)	Total (% ind/subj)
Negation	427 (3 %)	5 (3 %)	432 (99/1 %)
1 sg Present in matrix	5391 (36 %)	45 (30 %)	5436 (99/1 %)
2p in complement	134 (1 %)	0	134 (100/0 %)
(2p sg in complement)	(22 (0,1 %))	(0)	(22 (100/0 %))

*15017 is the total number of occurrences with an indicative complement (cf. table 1).

**150 is the total number of occurrences with a subjunctive complement (cf. table 1).

When other contextual factors are eliminated, a negated *pistévo* with a subjunctive complement occurs only in 5 sentences, that is, in approximately 3 % of all the subjunctive clauses (which should be compared to 50 %; cf. table 2). This means that, if not combined with any of the other factors discussed, negation does not seem to be particularly typical of the *na*-complements. Also, when considered separately, the occurrence of the matrix verb in the first person singular of the present tense is not more frequent with the subjunctive. Only 30 % of the subjunctive clauses then had 1sg present in the matrix (instead of 89 %; cf. table 3). Finally, when the other factors were eliminated, there were no occurrences of *na*-complements with second person (which should be compared to 35 %; cf. table 5). With *óti/pos* there were 134 sentences of this kind, the great majority of them in the plural.

The great difference between the indicative and subjunctive complements occurs in the combination of the factors examined. Consider table 8.

Negation in combination with 1sg present in the matrix clause occurs in 39 sentences with a *na*-complement, that is, in 26 % of all the sentences of this kind. This should be compared to 349 sentences with *óti/pos*, which covers only 2 %. Also the combination of 1sg present in the matrix and second person in the complement without a negation is far more typical for a sentence with a subjunctive complement (14 % of the *na*-clauses compared to approximately 1 % of the indicative clauses). When all the three factors occur together a *na*-complement seems to be the most frequent choice. With this combination the subjunctive clauses actually outnumber the *óti/pos*-complements. In 69 % of all the occurrences with this combination the complement is introduced by *na*. If, finally, number in the complement is considered, the numerical victory

TABLE 8 *Contextual factors in combination*

	Indicative (% of 15017)	Subjunctive (% of 150)	Total (% ind/subj)
Neg + 1sg Pres	349 (2 %)	39 (26 %)	388 (90/10 %)
Neg + 2p	4 (0,03 %)	2 (1 %)	6 (67/33 %)
Neg + 2p sing.	0	0	0
1sg Pres + 2p	121 (1 %)	21 (14 %)	142 (85/15 %)
(1sg Pres + 2sg)	(3 (0,02 %))	(5 (3 %))	(8 (37,5/62,5 %))
Neg + 1sg Pres + 2p	13 (0,09 %)	29 (19 %)	42 (31/69 %)
(Neg + 1sg Pres + 2sg).	(0)	(15)	(15 (0/100 %))

is complete, since no sentence with all the three factors referred to above, including singular in the complement, was found with an *óti/pos*-complement, but 15 with a *na*-clause. The dominance of the subjunctive in this combination of person and number occurs also in non-negated context (although there are few examples of this in the investigated material).

Although this investigation is far from exhaustive, it seems to demonstrate that none of the three factors discussed seems to be able on its own to trigger the subjunctive or even favour it. What seems to be certain, however, is that if all three are at hand (negation together with first person singular in the present tense in the matrix clause combined with second person in the subordinate clause), the choice of an *óti*-complement is rare, especially if the predicate of the complement is in the singular. This is neatly illustrated by Joseph and Philippaki-Warburton's example (29) repeated as (31) below:

- (31) a. *?dhen pistévo óti tha fíjis*
 NEG believe.PRS.1SG COMP FUT leave.PFV.NPST.2SG
- b. *dhen pistévo na fíjis*
 NEG believe.PRS.1SG SBJV leave.PFV.NPST.2SG
 Lit. 'I don't believe that you will leave.'

However, that the contextual combination exemplified in a) does not occur in the investigated material does not mean that it would be impossible. Consider example (32):

- (32) a. *dhen pistévo óti tha éxis próvlima*
 NEG believe.PRS.1SG COMP FUT have.IPFV.NPST.2SG problem
- b. *dhen pistévo na éxis próvlima*
 NEG believe.PRS.1SG SUBJV have.IPFV.NPST.2SG problem
 Lit. 'I don't believe that you will have a problem.'

In this case, it is easier to find an interpretation for sentence a) with the *óti*-complement, since the verb expresses something independent of the will of the addressee. Consequently, the two sentences seem equally natural without a context, however differently marked for modality (expressing different degrees of commitment to the content of the complement).

5 A "Compulsory" Use of Subjunctive with *pistévo*?

In the investigated material 29 of a total of 150 *na*-complements were of the kind that combined the three factors discussed in the previous section. Consider example (33):

- (33) *dhen pistévo na 'se kumúna?*
 NEG believe.PRS.1SG SUBJV be.IPFV.NPST.2SG communist
 Lit. 'I don't believe that you are a communist.'
 'You are not a communist, are you?'
 'I hope you are not a communist?'

Of the 29 examples found with the combination in question as many as 11 were marked like this, by a question mark. Also, when read out, the intonation signals a particular kind of question. The function of the utterance does not seem to be to make a simple statement, but to seek confirmation of an assumption by posing a question (more or less rhetorical, depending on the context). The question concerns the content of the complement. It seems to function rather like a tag question of the kind exemplified in the English translation of the example above: *are you?* Questions of this kind may also be followed by a more explicit feedback elicitor like *e* (see example (42) below) or *étsi* (lit. 'so'):

- (34) *dhen pistévo na me apatás me túti*
 NEG believe.PRS.1SG SUBJV me deceive.IPFV.NPST.2SG with this.FEM
edhó, étsi?
 here so
 '(I hope) you are not deceiving me with this woman here, are you?'

Given that the basic function of a tensed *na*-complement is to express some kind of non-commitment to its content, it is rather natural that it would be used (with or without negation) when a speaker utters something that needs confirmation from the addressee.

This pragmatic function of *pistévo* with the subjunctive is very similar to the one exhibited by the modal particle *väl/vel* in Scandinavian languages. Swedish *väl* may serve as an example. Basically having the function of expressing assumption, it often serves as a feedback elicitor. The assumption may, but need not be a hopeful one (cf. section 3 on meaning shift):

- (35) *Han har väl stövlar.*
 he have.PRS.3SG MODAL.PART boots
 a) 'I suppose he has got boots.'
 b) 'I suppose/hope he has got boots? He has got boots, hasn't he?'

In one example from the corpus the function of the utterance as a question is explicitly expressed:

- (36) *dhen pistévo na mu arnithís ke símera?*
 NEG believe.PRS.1SG SUBJV me deny.PFV.NPST.2SG also today
rótise stréfondas pros ti jinéka tu
 ask.PFV.PST.3SG turn.GERUND toward DEF woman his
 Lit. 'I don't believe that you will deny me again today, he *asked* turning toward his wife.'
 'You won't deny me again today, will you? he *asked* turning toward his wife.'

As it seems, in this particular pragmatic function *pistévo* cannot have anything but a *na*-complement.

Although this pragmatic context seems to typically occur with the second person (referring to the addressee) in the complement, it does not exclude other persons (the question still being posed to the addressee), as demonstrated in (37) and (38) both from the HNC:

- (37) *dhen pistévo na ksexásame kanénan?*
 NEG believe.PRS.1SG SUBJV forget.PFV.PST.1PL anyone
 'I don't believe we've (I hope we haven't) forgotten anyone?'

- (38) *dhen pistévo na tus ípe o jános*
 NEG believe.PRS.1SG SUBJV them say.PFV.PST.3SG DEF Giannos
papandoníu óti ...?
 Papantoniou COMP
 'I don't suppose Giannos Papantoniou told them that ...?'

A question that arises is if it is not possible to use a *na*-complement in a non-negated question with a similar function. As a matter of fact, a couple of examples in the corpus (from the 21 non-negated with this combination of person in matrix and complement) point in this direction:

- (39) *pistévo na 'se efxaristiménos. paneftixís,*
 believe.PRS.1SG SUBJV be.IPFV.NPST.2SG content very.happy
mamá, apándise o santiágo.
 mother answer.PFV.PST.3SG DEF Santiago
 'I suppose/hope you are happy.' 'Very happy, mother, Santiago answered.'¹⁵
- (40) *pistévo na éxis arketó xróno sti*
 believe.PRS.1SG SUBJV have.IPFV.NPST.2SG enough time at.DEF
diáthesí su ...
 disposal your
 'I hope you have enough time at your disposal ...'

In (39) the utterance is not explicitly marked as a question but the addressee's answer to the utterance has the form of a confirmation of a supposition rather than a reaction to a statement. In (40) there is no answer. But also in this case a relevant answer would be 'I have time', 'I am not in a hurry', or something similar, providing confirmation of the hopeful assumption expressed in the preceding utterance.

No non-negated examples of the kind discussed above were found with a question mark in the HNC corpus. A search in Google, however, gives for instance the following examples of this:

- (41) *bótes pistévo na éxis?*
 boots think.PRS.1SG SUBJV have.IPFV.NPST.2SG
 'I suppose / hope you've got boots?'

15 It should be noted that the text is taken from a translation of a novel by the Peruvian-Spanish writer Mario Vargas Llosa.

- (42) *dhískoles i epoxés ómos, opóte me éna 15ári ekastós ja*
 difficult DEF times however so with one 15_euro each for
óli méra pistévo na íne kalítera ...
 whole day believe.PRS.1SG SUBJV be.IPFV.NPST.3SG better
e?!
 DISCOURSE.PRT
 (...) *enoíte pos 15 evró ti méra akúghonde polí kalítera*
 of-course COMP 15 euro DEF day sound.PRS.3PL much better
apó 50 ...
 than 50
 'Times are hard, though, so 15 euro each for the whole day is better ... isn't
 it?'
 '(...) of course 15 euro a day sounds much better than 50 ...'

However, the fact that in the investigated material all sentences explicitly marked for question were negated, may suggest that this particular pragmatic function is more frequent with negation.

Interestingly, the kind of tag question discussed above is the only type of question that occurred in the material with a *na*-complement. There were no occurrences of interrogative sentences of the kind *Pistévis na éfje?* 'Do you think he (might have) left?' The non-negated *na*-complements all occurred in affirmative context and the interrogative sentences that did occur all had an *óti*- or *pos*-complement. This seems to suggest that also interrogation, the other factor mentioned above as associated with polarity, must be considered not to have an impact on the choice of complement type with *pistévo*.

6 Summary

For none of the verbs discussed in this paper does negation actually trigger subjunctive in the complement. Most of them, however, seem to typically occur with the subjunctive in non-affirmative context. *Nomízo* 'think, believe' is the only verb that takes a subjunctive complement only when negated (when used in the epistemic sense). The semi-factive verbs *kséro* 'know', *thimáme* 'remember', *vlépo* 'see', *vrísko* 'find', and *akúo* 'hear' occur with a subjunctive complement in interrogative as well as negative context. There are examples with semi-factives also in affirmative context, but they don't seem to represent the typical usage. A reason for this limitation to non-affirmative context may be that an undesired interpretation of truth-presupposition (that sometimes occur with these semi-factive verbs, unless the subjunctive is used) may not

occur as typically in assertive context. *Pistévo*, finally, differs from the rest by taking a *na*-complement also in affirmative context.

In order to empirically investigate some contextual factors possibly having an impact on the choice of complement type with *pistévo*, an investigation was undertaken based on data from the HNC corpus. The main question posed was if negation in the matrix clause in some way contributes to the choice of subjunctive mood. According to the data collected this does not seem to be the case. The *na*-complements were almost equally frequent in negated and non-negated contexts, showing that negation in itself cannot affect the mood choice. If the content of the complement is negated (by the negation of *pistévo* in the matrix clause), the non-commitment expressed by the subjunctive regards this negated content. In other words, the function of the subjunctive seems to be the same in negated as in non-negated context, and the choice of mood is not affected by the negation.

Apart from negation two other factors were examined, matrix verb in the first person singular of the present tense and complement with the predicate in the second person (singular and plural). None of the three factors examined in isolation turned out to be crucial for the choice of mood, but the combination of all three seems to be a context where a subjunctive complement is by far more frequent than an indicative one. With the complement predicate in the second person singular, the indicative is even rarer and did not occur at all in the corpus.

However, if the result of this investigation is representative, the particular pragmatic function of eliciting feedback (a context where an indicative complement seems to be impossible) seems to occur in negated context more frequently than in non-negated. Why this is so is an interesting question in need of further investigation, but it does not lead to the conclusion that the subjunctive is triggered by the existence of a negation in the matrix in a polarity-like manner. What triggers the subjunctive in these contexts, where this mood actually seems to be the only possible choice, is the pragmatic function of the utterance calling for the basic function of the subjunctive to express the subject's non-commitment to the truth of the complement.

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